The Role of Concept-Derivable Knowledge in Constructing Space-Related Textual Meaning

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Discourse is traditionally seen as situationally located, contextual interaction. However, narrative fiction clearly shows that discourse need not be tied to the simultaneity of interaction. The interpretation of a text relies on the encoding, but it is not void of interaction: the encoding evokes interaction and discourse, since both the author and the reader function as active participants in constructing meaning based on the text. In narrative fiction, situationality is evoked by the encoding, while in spoken discourse, the situationality of the physical context can be more readily used as an anchoring device. While text is used as a basis for discourse, meaning is not only at the level of the surface text, but it is evoked by the text. Textual meaning can be interpreted only if it can be used as a communicative basis for discourse. In this respect, the nature of both textual encoding and the nature of discourse need to be reconsidered. In this article, I will focus on one aspect of textual meaning, namely, the construction of spatial surroundings as a textual and as a discourse phenomenon.

Typically, when a setting is considered, we have this type of a beginning in mind:

(1) "Hamelin is a pretty town on the river Weser in Germany. About 600 years ago, the town suffered a terrible plague of rats."

In this short example from the beginning of *The Pied Piper of Hamelin*, both the location (*Hamelin, a pretty town at the river Weser in Germany*) and the time for the story (*about 600 years ago*) are both **explicitly** given together with additional background information (*the town suffered a terrible plague of rats*), which is needed for establishing the point for the forthcoming story. The textual strategy chosen by the author emphasizes narration rather than description. Traditionally, the focus of research has been particularly on this type of explicit encoding of surface level information (cf. e.g. Virtanen 1992). In contrast to the explicit or generic fairy tale settings, settings in narrative fiction are more subtle, and are often based on partly **implicit** means. Thus, a large part of textual meaning is based on concept-derivable encyclopedic knowledge, which is not present in the encoding but is still activated in the discourse. In this sense, discourse "is not just a sequence of linguistic units: its coherence cannot be understood if attention is limited just to linguistic form and meaning" as Schiffrin (1994:416) points out. Rather, a linguistic expression evokes a whole range of associative experience related to this item (Werth 1999:43). Basically, this shows that meaning is not just a matter of Fregean logico-structural compositionality at the level of sentences (or propositions), nor is meaning a matter of truth-conditions

or referential relations only. Rather, the global context, which is partly based on lexical cohesion, has a strong influence on the meaning at the local textual level. Meaning as a whole is not only based on what is composed of the local and explicit textual elements, such as words or phrases. Rather, at the same time the reader uses the global level for narrowing down forthcoming new information, using both bottom-up and top-down processing (Brown & Yule 1983:234, Enkvist 1989:166, Langacker 1998, Togeby 1993). The compositional whole of structured relations between lexical elements evokes and partly restricts the meaning of an expression (cf. Langacker 1998:248). In this context, it is important to consider what is evoked by the text in relation to what the reader knows and thus need not be encoded. In my opinion, an additional level of text-external contextual knowledge is not only a part of pragmatics but needs to be included into text semantic descriptions, since the reader builds a mental model (cf. Johnson-Laird 1983) by matching textual information with text-external knowledge, i.e. what he or she knows of the world -- and shares with the author and other potential readers with the same type of socio-cultural background.

Let us look at an example. At the beginning[1] of *Gaudy Night* by Dorothy Sayers (1987) the location, *Mecklenburg Square*, is named just like the town of Hamelin in the fairy tale (1), but there is more concept derivable spatial information available for the reader.

> (2) "Harriet Vane sat at her writing-table and stared out into Mecklenburg Square. The late tulips made a brave show in the Square garden, and a quartet of early tennis-players were energetically calling the score of a rather erratic and unpractised game. But Harriet saw neither tulips nor tennis-players. A letter lay open on the blotting-pad before her, but its image had faded from her mind to make way for another picture ..."

I have underlined the conventional spatial elements in this example. By looking at these spatial elements only, the text would get a strange interpretation where Harriet Vane -- together with her writing-table -- would be outdoors, in the Mecklenburg Square. For an average reader, this would **not** be the normal interpretation of this setting. Even though the location, *Mecklenburg Square*, is named, it is only a part of the spatial setting evoked by the text. In this context, the word *writing-table* refers to the physical piece of furniture, but when co-textually combined with the protagonist's actions of *sitting* (with an implicit chair) and *staring out* (with the implicit window) it also functions as a frame specific signal of location. Besides, it is associated not only to indoors but also to a specific room (established as a part of the local coherence, cf. Givón 1995) and to a relatively conventionalized location within this room (by the implicit window) through its prototypical function. The name of the square brings into the text information of the potential global surroundings (attached to the level of global coherence, cf. Givón 1995) of the story, which is then either confirmed or modified while the story proceeds. The point here is that any description of spatial coherence that focuses on the use of primarily spatial lexical information or on adverbials of location and motion verbs only, is bound to lose a great deal of the spatial information actually provided by the text and actually used by the reader, since a large

[1] This is the beginning of the main text in chapter 1. The chapter itself begins with a citation, a poem by Sir Philip Sidney, which precedes this sentence.

part of spatiality is implicitly triggered. In narrative fiction, it is often evoked by the implicit, situationally modified, concept-derived information. Yet, the explicit information is typically the material most linguists focus on, leaving a large part of the implicit to the field of world knowledge outside the scope of linguistics.

Let us have a closer look at example (2). The strategy used by Sayers differs dramatically from the explicit beginning of the *Pied Piper* (1). There are two layers of information in this sample. If research focuses on the explicit textual rather than on the implicit discourse level, a large part of the information evoked by the text is missed. At the level of text, Harriet stared **outdoors,** but the relevant point is that Harriet hersef is ***not*** outdoors. She sits **indoors**, but the indoors is built in to the text implicitly. Moreover, the implicit room is both the actual deictic origo and the local frame of reference in relation to the protagonist's point of view at this stage. Thus, the textual encoding focuses on the global surroundings of the textual world, while the local frame is constructed implicitly at the level of discourse rather than text -- and it relies on cultural knowledge (cf. Minsky's 1975, 1980 frames and Schank & Abelson's 1977, 1980 scripts). The reader matches spatial information in the text with text-external spatial knowledge. The reader's interpretation is thus a textually guided mental model, but not at the level of propositions (as in Johnson-Laird 1983), but at the levels of text and discourse (cf. Werth's text and discourse worlds 1999). It is based on both the encoding and the interaction created by the encoding. What the author and the readers share is a vital part of this interaction. The important thing to note here is that the interaction is built into the text.

Even though concepts like *writing table* in the Sayers example above are used for evoking associations to a matching frame, individual concepts alone do not establish the setting. Rather, the interaction at levels of concepts, sentence, text and discourse need to be considered. The process of building textual meaning is not based on lexical cohesive ties (cf. Hoey 1995) only, nor is the coherence based on textual compositionality only. The way concepts function in relation to the structure and how this structured whole functions in relation to what the reader knows intertextually or text-externally is also vital. Spatial meaning -- just like the rest of the meaning of a text -- is only partly derived from what is linguistically encoded into the text. In the same sense, a large part of spatial meaning is based on concept-derivable encyclopedic knowledge, which is activated in the discourse.

The combination of truth-conditional, logical, referential and lexical feature-based descriptions, which are among the core areas of traditional semantics, yield only a part of textual meaning. An important part to be added to the descriptions of textual meaning is the emergence of meaning which results from matching the linguistic encoding with intersubjectively shared text-external, but textually evoked knowledge of the mental, socio-cultural and physical worlds as these are interpreted and encoded by language. This text-external contextuality is established as a part of the interaction between the author and the readers, and it provides the basis for more general spatio-temporal coherence.

Some linguistist, e.g. Fodor (1998:25), have accurately noted that concepts are constituents of thoughts and of one another, and that "mental representations inherit their contents from the contents of their constituents" (ibid.). Yet, generally this type

of information is not included into the lexical descriptions. In the dictionary descriptions of objects such as *writing-table,* the focus of attention has been on the function and the nature of the object as a surface or a container. Let us take two examples from the *Collins Cobuild Dictionary* (Sinclair et al. 1995). The closest entry *Cobuild* has is the *writing desk.* "A **writing desk** is a piece of furniture with drawers, an area for keeping writing materials, and a surface on which you can rest your paper while writing." (*Cobuild* 1995:1942). The frame information is omitted in this definition, since the user of the dictionary possesses the same frame knowledge as long as enough of the general cultural background is shared. *Square* in the *Cobuild* (1995:1617) has 14 senses, the second of which states that "In a town or city, a **square** is a flat open place, often in the shape of a square." This definition names the potential frame as town of city, but this is not done systematically, as the example of the *writing-table* showed.

Furthermore, the words used for creating spatial frames need not necessarily be primarily spatial. For example, acts like *skating* and plants like *palm trees* are associated with very specific climates and environments, even though they are not primarily spatial by nature. And, the nature of the spatiality can differ from the actual textual function the word has in relation to the frame. For example, geographical words can have non-spatial, metaphorical functions, e.g. a *mountain* denoting a large quantity. In this sense, the reader uses knowledge which is not provided by typical dictionaries, and which is often excluded from the lexical descriptions. However, the knowledge of an object's prototypical location is at least as relevant for the overall spatial information as is the nature and the function of the object. To illustrate this, let us imagine that the following lists of words (3 and 4) were taken from two texts where the coherence would be based on these cohesive lexical chainings[2]:

(3) Lagoon, coral reef, surf, salty water, atoll, ocean, shellfish, shark, diver, yacht, boat, beach, palm trees, swim

(4) Mountain, Jeep, melting water, glacier, pass, crevasse, moss, Nanga Parbat, Karachoram highway, marmot, yak, snow, scree, yourt

Each list contains words of different parts of speech. Yet, items in each list have roughly the same frame of location. Coasts (3) and mountain areas (4) in these examples, just like seas, plains and deserts are all frames associated with frame sensitive objects and acts, which in turn can be used for triggering the frame itself. It is important to notice through these examples that the concepts related to the textual frame are not only spatial concepts, but the lists also include e.g. plants, objects, animals associated with these surroundings. In the forthcoming co-text, concepts belonging to another prototypical referential surroundings either change or modify the textual world unless linguistically encoded as a text world internal embedding, by e.g. cognitive verbs (such as *remember, imagine*, etc.).

There are various potential means to include this type of information in the lexical descriptions. For example, the *Oxford-Duden Pictorial Dictionary* lists frames with attached objects or professional roles, but the number of frames is very limited. Besides, the frames are not used as such but are modified to fit textual needs. Other lexical approaches are as problematic. For example, *WordNet* and Roget's *Thesaurus*

[2] For the actual realizations of lexical cohesion, cf. e.g. Hoey 1995, Halliday & Hasan 1976.

type of information of lexical relations, even when attached to morpho-syntactic structural frames, do not give the necessary amount of information needed for attaching spatial knowledge to a piece of narrative fiction. However, since a large part of concepts belong to overlapping categories and often to several frames, determining the frame by a set of concepts only is problematic. Rather than doing this, the focus of research should be on the general principles of how the interaction between concepts, lexical relations, structure and referential frames functions. The information in this interaction should be monitored in relation to the layer of sharedness and to the additional information, which can be contextually attached to the concepts. A linguist should then focus more on the whole, including lexical relations as well as how the whole is structurally and textually modified, and how it functions as a part of the discourse. In this sense, I would also include information not explicitly present in the text. Lexical and other cohesive relations (e.g. Hoey 1995, Halliday & Hasan 1976) which function as a basis for constructing local and global coherence (Givón 1995) to the text are an important part of what concepts are and how they function in a text. But narrative discourse as a whole is established by relating textual encoding to text-external knowledge. The lexical cohesion and attached structures need to be matched with text-external knowledge to produce coherence.

It is also essential to realize that the author of narrative fiction seldom describes the world as it is. Rather a model of the world is textually modified to fit the needs of the story. This **text world** (cf. Werth 1995, 1999) is based on the human ability to combine explicit textual information with additional contextual knowledge. Hopefully, I have shown above that we are not dealing with the lexical properties of a text only. There is an important additional parameter that needs to be taken into account, namely, how the matching is achieved. Here is another example, the first chapter of E.M. Forster's *A Room with a View,* to illustrate this:

(5) "The **Bertolini**

'The **Signora** had no business to do it,' said *Miss Bartlett*, 'no business at all. She promised us south rooms with a view, close together, instead of which here are north rooms, here are north rooms, looking into a courtyard, and a long way apart. Oh, *Lucy*!'

'And a *Cockney*, besides!' said *Lucy*, who had been further saddened by the **Signora's** unexpected accent. 'It might be *London*.' She looked at the two rows of *English people* who were sitting at the table; at the row of white bottles of water and red bottles of wine that ran between the *English people*; at the portraits of the *late Queen* and the *Poet Laureate* that hung behind *the English people* heavily framed; at the notice of *the English church (Rev. Cuthbert Eager, M.A. Oxon.)*, that was the only other decoration of the wall. '*Charlotte*, don't you feel, too, that we might be *in London*? I can hardly believe that all kinds of other things are just outside. I suppose it is one's being so tired.'

'This meat has surely been used for soup,' said *Miss Bartlett*, laying down her fork.

'I wanted so to see **the Arno**. The rooms **the Signora** promised us in her letter would have looked **over the Arno**. **The Signora** had no business to do it at all. Oh, it is a shame!'" (Forster 1978 (1908): 23)

Spatial expression are underlined in the text. Thematically, the spatiality at the beginning of this text echoes the title of the novel itself but in a contradicted form. The location is a room *without* a view -- in contrast to the title. There are references both to the local surroundings, *tables* and *rooms*, and to the global setting, *London* and *Arno*. From this sample, it is obvious that the underlined spatial references constitute only a part of the spatial, frame-related information. The whole setting is a more complex and compositionally layered system. For example, at the very beginning both Italy and the hotel are constructed implicitly. Thus, lexically, the underlined items are merely a part of the basis for how the reader constructs the location. In the text, there are two competing referential layers based on general coherence extablished by surface level cohesion: The Italian and the English layer. The Italian layer is marked with bold font in the sample. A hotel in Italy is evoked by references to the rooms, the Signorina and the unnamed guests sitting by the tables. The actual location in Italy is finally confirmed by the reference to the Arno. The English layer is marked with italics. It consists of the reference to the English guests, Cockney dialect and stereotypical British decorations (a part of which, like the *late Queen*, the *Poet Laureate*, are anaphorically, cataphorically and through world knowledge tied to the English). The lexical references to the English setting dominate the sample but are marked as not being the prototypical properties of the main frame. The actual frame of reference is established with a very limited amount of lexical cues (*the Bertolini, the Signora* and *the Arno*). Yet, the choice of the correct frame, an Italian hotel made as close to the homely British environment of the English guests, is textually made clear in relation to the text external knowledge that a typical reader has of these frames.

The Forster example clearly demonstrates that the reader aims at interpreting the communicative intentions of the author (in establishing surroundings for the forthcoming story), and in accordance with the Gricean (1989) maxims[3] and Sperber and Wilson's (1986) Relevance Theory. If the scene of the story were England, there would be no need for referring to the people as English people. Referring to the English people would in this case be marked and unnatural. It is a relevant item of information when abroad, especially when the Englishmen are marked as the typical guests of the location and function as a key element of the setting. Moreover, the conditional *might* with London and London related cockney as the *unexpected accent* within this frame distance the London and British setting as a potential option. The vocabulary associated with England is marked as not being the frame but components outside the frame proper. The amount of Italian lexicon is limited, but contextually tied to the frame. The *Bertolini* in the name of the title and the *Signora*, the very first words of the story evoke the Italian frame, which is contextually closely tied to the frame proper. All the references to the English people and the British artefacts are decorations within this frame. Rooms, with and without a view, with the attitude of the visitors evokes the Hotel frame, but the frame could be potentially an Italian hotel

[3] With the notable difference in relation to the *maxim of quality*.

also outside Italy until this interpretation is anchored with the reference to the Arno, a river in Northern Italy, which runs from the area of Florence towards Pisa. But the reference to the current location (through the Arno) is also indirect. The text does not explicitly say that the characters are by the Arno. Rather, the text at this point refers to the letter, where a promise of a room with a view of the Arno was given. In order to calculate that this is the present location, it needs to be connected with the very beginning where the main characters, the British guests complain that the Signorina had not kept her promise.

Rather than focusing on a single frame, the focus of research should be on the general state of affairs -- with attached frames of reference. According to Werth (1999: 69) there are two sources of information for defining a state of affairs: the text itself (including co-text) and the knowledge of the participants. Both what the author knows of the audience, and what the audience actually knows affect the final interpretation. Text is used within this discourse both to evoke and modify the knowledge this interaction is based on. The text-external component includes partly overlapping areas of sharedness in relation to what Verschueren (1999) calls the Mental world, the Social world and the Physical world. Discourse is about negotiating the relevant part of what is shared in relation to the new communicative needs. These new communicative needs are discourse specific. They are brought into the discourse through the co-textually and contextually specified use of concepts. Thus, both inherent and context specific parameters need to be examined carefully. The internal concept properties include the reference in relation to other naming relations of a lexicon, while the context specific properties are situationally manipulated. The point here is that concepts inherit not only referential properties but also carry with them the information of the typical location associated with the concept. Concepts are attached to surroundings through interactional or intertextual experience. This type of information, when it is attached to co-textually cohesive concepts, can be used to trigger surroundings in a text. Just as there is variation in real life settings and frames of reference, the setting of a text needs to be further specified and modified to increase the sense of authenticity. But the process itself is complex and includes bidirectional interaction not only between discourse participants but also between what is locally and globally present in the text and what is established as shared and modified.

Discourse information is the product of both the meaning of a text together with what the text evokes from memory, especially in relation to the experience associated with the concept (cf. Werth 1999:43). Thus, even though a concept can be seen as "a configuration of knowledge characteristically stored and activated together" (de Beaugrande 1984:38), the concept alone does not establish the textual world. The textual world is not only "the cognitive correlate in the mind of a text user for the configurations of concepts activated in regard to a text" (de Beaugrande 1980:77-78). Rather, the reader interprets the text in relation to the supposed intentionality of the author to tell a story and create characters, surroundings and all the other conventional elements of a story.

There is bidirectionality in the interpretation process in that knowledge evoked by concepts is used for creating the textual world. The textual world, while developing, further focuses on the meanings of the forthcoming concepts. Concepts

as a part of the sentence and text level structures create the textual world in relation to text-external knowledge evoked by the text. The textual world -- once established -- restricts the potential meanings of concepts occurring later on in the text. In this sense, the global coherence is used for focusing the forthcoming new and local textual information, and the reader uses top-down matching of the textual information together with text-external knowledge of potential referential surroundings, like frames, scripts and/or mental models, for constructing what has variously been called Textual world (De Beaugrande 1980, 1984), Story world (Segal 1995), Fictive world (Emmott 1997), Text world and Discourse world (Werth 1995, 1999). This relies both on the text and on the reader's personal experience and intertextual knowledge of various surroundings.

Both the author and the reader exploit world knowledge. Once the matching between the text-internal information and text-external knowledge succeeds, it is contrasted with the text to see how it needs to be modified for text-specific purposes. Typically, the information provided by the text does not completely match the surroundings as they are according to the reader's text-external knowledge. Linguistically, the interesting point is how this is achieved. There are several layers of meaning that need to be taken into account, including multifunctionality of the lexical elements as well as contextual compositionality. The important feature of the multifunctionality of linguistic elements is the negotiability of meaning at several layers, including the levels of words, clauses, sentences and the text. Moreover, compositionality includes not only textual information but also information evoked by the text. Thus, compositionality is not a property of sentences (or propositions) as it is most often investigated but rather a property of discourse. The *writing-table* in the Sayers example (2) and the *table* in the Forster example (5) have discourse functions both at the levels of sentence and text. The most obvious way to prove the relevance of text-external knowledge is to point out that also when propositional truth-values are considered, the interpretation is based on text-external shared knowledge contrasted with the textual information. The problem is that this type of world knowledge is excluded from most semantic descriptions. However, my claim is that it is relevant and should be included not only in pragmatics but also in semantics.

The textual world is dynamic and can be remodified while the story proceeds, and the reader is guided through the fictional world where the episodes take place. New surroundings can be introduced, linked to the existing textual world and the whole setting can be changed. The beginning of the text can be located in the world of the main story, or it can be a frame for a long embedded story (as in e.g. Irving's 1989 *Owen Meany*), or it can function as a background for the story itself (as in e.g. Darnton's 1996 *Neanderthal*). Additional textual worlds (in the form of plans, reminiscenses, imagination, dreams, etc.) can also be embedded in the textual world originally established at the setting. Once established, a textual world can assign new, text-specific meanings to concepts. It is even possible to assign new meanings for new referential relations, as in Science Fiction. One of the best known examples is *A Clockwork Orange* (Burgess 1988 (1962)), which relies on the non-matching cultural knowledge (like fashion) but also includes neologisms valid within the textual world only (e.g. *the Korova Milkbar, a milk-plus mesto, skorry, the old moloko, mozg, deng,*

tolchock, veck, viddy, ptitsa - and product names, like: *vellocet, synthemesc, drencrom, veshches*). Yet, the text is co-textually clear.

In this paper, I have clearly shown that the analysis of the explicit elements of the surface text is merely a part of the information actually triggered by the text and used by the reader for the actual interpretation of the textual meaning and especially for constructing the setting for the story. It is important to note that both the information triggered or evoked by the concept and the way this information is co-textually and contextually modified is used for creating a spatial setting for a story. The traditional research focus on the combination of structural, logical, referential and lexical feature-based descriptions yield only a part of textual meaning. An important part to be added to these descriptions of textual meaning is the emergence of meaning which results from matching the linguistic encoding with intersubjectively shared text-external, but at the same time textually evoked knowledge. This text-external contextuality is established as a part of the interaction between the author and the readers, and it provides the basis for the more general spatio-temporal coherence.

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